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CONVERSATIONAL ENGLISH FOR NONENGLISH-SPEAKING CHILDREN.

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A 4-YEAR LANGUAGE ARTS PROGRAM WAS BEGUN ON GUAM USING TWO NEW APPROACHES. IT WAS FELT THAT THE PRIMARY GRADES LANGUAGE ARTS PROGRAM SHOULD INCLUDE (1) A YEAR OF CONVERSATIONAL ENGLISH, FOLLOWED BY THE USUAL READING ACTIVITIES IN GRADES TWO AND THREE AND (2) ONE-HALF YEAR OF CONVERSATIONAL ENGLISH FOLLOWED BY THE USUAL READING ACTIVITIES. IT WAS HYPOTHESIZED THAT BOTH OF THESE APPROACHES WERE SUPERIOR TO THE STANDARD METHOD, NAMELY, THE EARLY INTRODUCTION OF FORMAL READING IN THE FIRST GRADE, AND THAT THESE SUPERIORITIES WERE APPARENT BY THE END OF THE THIRD GRADE, OR POSSIBLY THE FOURTH. AT THE END OF THE FIRST YEAR, A TEST OF ORAL ENGLISH AND THE SCHOOL ACHIEVEMENT TEST WERE GIVEN TO ALL PUPILS. DURING THE SPRING OF THE THIRD YEAR, THE CALIFORNIA ACHIEVEMENT TESTS AND THE PICTURE SECTION OF LADO'S TEST OF AURAL COMPREHENSION WERE GIVEN. FINALLY, THE READING SECTION OF THE CALIFORNIA ACHIEVEMENT TEST WAS GIVEN TOWARD THE END OF THE FOURTH YEAR. IT WAS RECOMMENDED THAT A LANGUAGE ARTS PROGRAM SHOULD INCLUDE A LONGER PERIOD OF TIME DEVOTED TO TEACHING CONVERSATIONAL ENGLISH, AND THAT THIS WOULD IMPROVE THE SUBSEQUENT LEARNING OF READING AND LISTENING SKILLS. (JL)

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CONVERSATIONAL ENGLISH FOR NON-ENGLISH SPEAKING CHILDREN*

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The majority of Guam's native school children reach grade one with little or no facility in speaking, reading, or understanding English; their native language is Chamorro. The school program is officially conducted in English. The Scott-Foresman readers, primers, etc., form the backbone of the language arts program through the elementary grades. The casual visitor to a typical classroom would note the close similarity between its programs and the familiar classroom of the mainland.

Unfortunately, this program is relatively ineffective. Our pupils are retarded in their language development at least one year and, frequently, two or three years. A number of unpublished studies undertaken by Guam's Department of Education provide dreary documentation.

In the book, Teaching Spanish-speaking Children, Lewis Tireman (1951), developed the notion that prolonged periods of reading readiness are necessary for bilingual pupils. He also noted that their teachers need special preparation. Tireman felt that conversational facility should precede formal instruction in reading.

Bradley (1956) demonstrated that the postponement of formal reading instruction in favor of a readiness approach did not result in losses; many of such pupils showed marked improvement by the end of the third grade.

In brief, the literature suggested that reading readiness be extended for non-English speaking children. Clear-cut data were not available indicating how long this period should be. Nor, was clear-cut evidence available on the effectiveness of such programs. To answer these and related questions, the following three-year experiment was devised.

We raised three hypotheses:

1) The primary grades language arts program for Chamorro-speaking pupils should include one year of conversational English, followed by the usual reading activities in grades two and three.

2) The primary grades language arts program for Chamorro-speaking pupils should include one-half year of conversational English, followed by the usual reading activities.

3) Either or both of these approaches is superior to the standard method, namely, the early introduction of formal reading in grade one; and that these superiorities will be apparent by the end of the third grade, or possibly, the fourth.

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*The research reported herein was performed pursuant to a contract with the U. S. Office of Education, Department of Health, Education, and Welfare.

In brief, then, we believed that a language arts program ~~on Guam~~ should include a longer or shorter period of time devoted to teaching conversational English, and that this would improve the subsequent learning of reading and listening skills. Our experiment was designed to test the validity of these conjectures.

Procedures

The four* largest elementary schools enrolling primarily Guamanian pupils were selected for the study. In each school, pupils were randomly assigned into a Conversation class, a Revised Readiness class, and an Experimental Control class (excess pupils were assigned to regular classes).

This yielded twelve first grades in four experimental schools. Each school contained two experimental classes and one control class.

Other researchers have remarked upon the tendency of experimental schools to go "all out" under the stimulation of a research program (something like the "Hawthorne effect" of General Electric fame). If this condition were to develop, it might have the melancholy result of mitigating, if not completely losing, the control classes. To protect against this occurrence, five additional control classes were established in five schools unrelated to the experiment. Neither these principals nor these teachers were informed of their status. These pupils were simply given the identical tests given to the pupils in the experimental schools.

The foregoing procedures were assumed to control (via randomization) such variables as amount of English spoken in the home (almost none was found), ability to learn, motivation for school work, amount of help received at home, and mental ability. As a further control, however, I.Q. measures were obtained and analysis of covariance utilized.** This left the matter of teachers to be considered. The principals of the four experimental schools were asked to assign two of their typical teachers each to the experiment. This was repeated at the end of the first year, and again at the end of the second year of the study. In other words, we started each year afresh with a new group of teachers. It is believed that this minimized the possibility of loading the experimental classes with outstanding teachers. The experimental staff found no evidence to challenge this belief.

The experiment was originally designed to run for three years. That is, we intended to follow our first grade pupils through grades one, two, and three. For reasons given below, certain phases were extended into the fourth year.

A key problem lay in teaching the experimental teachers how to teach the method assigned, either Conversation or Revised Readiness. During the

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*A fifth school had to be dropped because its enrollment permitted only two first grade classes.

**Note: Analysis of covariance is a statistical method for making different groups "equal"; in this case, in intelligence.

summer of 1958, the College of Guam provided an eight-week workshop for these teachers.* Since the basic concept of conversational English was new to our teachers, considerable effort went into helping them learn and plan how to teach without the pre-primers, workbooks, etc., to which they had become accustomed.

During the school year, the research staff provided close supervision and a weekly seminar at the college. It came as something of a shock to the staff to find that teacher behavior changes very slowly. To our dismay, we discovered that although teachers may profess complete agreement in workshop or in seminar, this may not appear in the same techers' classroom behavior. During the first three years of the study, we devoted an increasing amount of tim to this problem: how does one convert teachers' college behavior to classroom behavior? The second and third summers' workshops were sharply revised to include practice teaching, observation, and participation for the experimental teachers. The gain, if any, was not noticeable to the naked eye. We were driven to the conclusion that teacher behavior is remarkably resistant to change.

The experimental classes fared better than either set of control classes in the matter of equipment and supplies. In each experimental school, the Conversation and Revised Readiness teachers shared a record player and a number of albums, emphasizing singing and rhythmic activities. These were occasionally shared with the less fortunate Control teacher in that school.

The foregoing procedures may be summarized briefly:

- In four schools, three classes each of beginning first grade children were formed by random assignment. The Conversation classes taught no reading in grade one; conversational English was emphasized. The Revised Readiness classes were similar, but after Christmas, formal instruction was begun in reading. The Control classes worked through Scott-Foresman's pre-primer, primer, etc. The same pupils were followed for four years. The experimental teachers (but not the controls) attended special summer workshops, seminars during the school year, and were carefully supervised. However, during the fourth year, supervision and special help was discontinued. At the end of each year, a new group of experimental teachers was selected by the respective school principals.

An additional control class was set up in each of five schools that were not related to the experiment. This was done to control any side effects that might be generated in the experimental schools. This group was designated the Non-Experimental Control.

We started with 470 pupils and ended with 383. The losses occurred primarily in one school when a parochial school opened its doors. The overall losses were proportional among the four groups.

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*Warm appreciation is due Dr. Clare Walker for her remarkable contributions here, as well as in supervision and in seminars. She now directs elementary education in the Virgin Islands.

The experiment started in the fall of 1958 and officially concluded in the spring of 1961. This meant that workshops, seminars, and supervision were stressed during this period. In February and March of 1962, four years later, one of the tests was repeated (see below).

Tests

The Columbia Mental Maturity Scale was given during the first two months of the experiment. This largely non-verbal test had been found to predict school achievement for Guamanian pupils.(Cooper, 1958). Two and one-half years later, the revised form was given.

At the end of the first year, the School Achievement Test was given to all pupils; proficiency in oral English was measured by a test specially devised for this purpose.

A second test of oral English was devised and given at the end of the second year. Unfortunately, it proved to be unscorable and was, consequently, discarded.

At the end of the third year, the California Achievement Tests and the Test of Aural English were given. The Reading section of the C.A.T. was repeated during the fourth year.

Results

Our data failed to support our initial three hypotheses. Both control groups equalled or excelled both experimental groups in various measures of language proficiency. At the end of four years, the four groups of pupils, Conversation, Revised Readiness, Experimental Control, and Non-Experimental Control were strikingly alike. The differences were relatively small, reaching statistical significance (5%) in only a few instances. It is very doubtful whether or not the differences possess educational significance.

Evaluation: The First Year

In April of 1959, all pupils were tested with the Primary Battery I, Grade One, of the American School Achievement Tests (Pratt, et al, 1955), and the Test of Oral English. The Conversation classes were found to be superior to the other groups in their ability to use oral English. In descending order, they were followed by the Revised Readiness pupils, the Experimental Controls, and finally, the Non-Experimental Controls. The Revised Readiness group was a bit higher in overall achievement as measured by the American School Achievement Tests; the Conversation group was lowest.

The Test of Oral English - T.O.E.

The research staff was unable to locate a ready-made measure of proficiency in oral English. (Note: This is a serious omission in educational measurements!)

A test was made by selecting certain sequence pictures from Scott-

Foresman's first grade science book, Look and Learn, (Beauchamp, 1951). These pictures tell a story. For example: one series of four shows a wildcat, some ducks; the cat approaches, the ducks fly away. The pictures were mounted on cardboard. The child was handed a set and asked to tell what was happening. The examiner recorded all that was told. After six such sets, the child was given three 8 x 10 glossy photographs (presented one at a time). These pictures were taken locally. One showed a school age family getting dressed, another showed them eating dinner, and the third showed the family seated around the T-V set.

The T.O.E. was scored by a panel of five drawn from the research staff. The child's responses were read to the panel by a disinterested person. No identifying data (sex, school, experimental class, examiner) were revealed. The judges arrived at their decisions independently; the pupils score was the median of the judges.

A score of 5 represented the best performance. Only pupils who could use prepositions reached the five level. The score of 1 was given for sheer enumeration with no other attempt to disclose verbal fluency.

A reliability check was run by selecting 50 scored papers at random. The panel rescored these without knowing the previous scores. Forty papers stayed the same, seven dropped one point, and three increased by one. We were satisfied that the scoring was sufficiently reliable.

The results appear in Table 1. The table shows, for example, that 49 Revised Readiness pupils obtained a score of 4; it shows further that 22 Non-Experimental Control children scored 2.

Table 1

Test of Oral English Scores by Treatment Groups (N = 509)

Score	Conversation	Revised Readiness	Experimental Control	Non-Experimental Control
5	21	11	10	1
4	49	36	17	21
3	45	67	46	64
2	8	14	23	22
1	4	6	17	27

The various relationships in Table 1 were analysed by chi square. The full table (in effect, comparing all groups with each other) yields a chi square of 78.1; with 12 degrees of freedom, this value is highly significant. Other analyses of Table 1 showed that the Conversation pupils received the highest scores. They were followed by the Revised Readiness, then Experimental Controls, and in last place, Non-Experimental Control. These differences were significant at 5% or better.

These data show that pupils who were taught conversational English in grade one were in fact better able to use oral English than their peers who concentrated on other things (mostly reading).

The T.O.E.'s validity was established through teacher ratings. Teachers were asked to divide their classes into three equal groups: those pupils who spoke English best, those who were poorest, and the remainder in the middle. These ratings were compared with the actual scores received from the T.O.E.; the results appear in Table 2.

Table 2

Teachers' Ratings Compared with T.O.E. Scores

T.O.E. Score	Teachers' Ratings Poorest	Middle	Best
5	4	12	27
4	15	42	62
3	69	79	52
2	29	15	8
1	27	14	4

Table 2 yields a chi square of 84.5 and 8 degrees of freedom. This highly significant value shows that T.O.E. scores were related to teachers' ratings; in other words, the T.O.E. is a valid measure of the pupils' ability to use oral English.

The American School Achievement Tests, Form D, Primary Battery, Grade One, was given to all pupils in March and April of 1959. The mean grade placements for each class are revealed in Table 3.

Table 3

American School Achievement Tests
(Reading and Arithmetic) Mean Grade Placements

School	Method: Conversation	Revised Readiness	Ex. Control	Non-Ex. Control
Barrigada	1.55	1.59	1.51	1.24 (a)
Inarajan	1.34	1.55	1.48	1.48 (b)
Sinajana	1.02	1.46	1.24	1.71 (c)
Yona	1.04	1.49	1.57	1.50 (d)

(a) Chalan Pago, (b) Santa Rita, (c) Talofofo, (d) Yigo

The unweighted group means in Table 3 were analyzed according to Lindquist (1953, pp.177-9). The results are shown in Table 4.

Table 4

Analysis of Variance (Unweighted Group Means):
American School Achievement Tests

Source	df	Sum of Squares	Mean Square
Methods	3	.200	.0667
Within	12	.391	.0326
Total	15		

F = 2.04

The F of 2.04 shows that differences in achievement between the various methods can be attributed to chance.

We concluded that an emphasis upon conversational English did not critically retard these pupils in comparison with those who emphasized reading.

Evaluation: The Third Year

The major evaluation took place during the spring of the third year of the study. Two measures were included, the California Achievement Tests (Reading, Arithmetic, and Language), and the picture section of Lado's Test of Aural Comprehension. Tables 5 through 10 show the various means and the summaries of the analyses of covariance applied to the C.A.T. data.

Tables 5 and 6 show that the variations in reading scores between the experimental and control groups appear to be the result of chance rather than because of differences in treatments.

The same story is repeated in Tables 7 and 8 which present the C.A.T. Language data, and in Tables 9 and 10, which reveal the Arithmetic data. It is instructive to note that the interaction term was significant only for the teaching of arithmetic. This is all the more interesting when it is recalled that little attention was paid to arithmetic during the course of the three-year study. It would appear that our efforts in supervision, seminars, etc., had a homogenizing effect upon Guam's schools in so far as the language arts curriculum was concerned; this effect did not extend to arithmetic.

The data obtained from Lado's Test of Aural Comprehension* support

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*This test measures the ability to understand simple statements and ideas. The examiner reads a statement; the pupil responds by marking the picture that answers or identifies the remark.

the foregoing remarks. Table 11 shows the various means and I.Q.'s while Table 12 presents the analysis of covariance data. The tables show a picture that by now should be familiar: small differences between methods that lack both educational and statistical significance. The interaction term was significant at the 5% level.

Evaluation: The Fourth Year

The California Reading Test, Form X, Upper Primary, 1957, was administered to all classes during February and March of 1962. Our pupils were then in grade four. The comprehension and vocabulary scores were analyzed separately, in hopes of finding some support for our ideas.

Actually, we were looking for (or expecting) a "late blooming" effect similar to that reported in other studies. Well, the little that occurred went the wrong way: our control classes came to the fore.

Table 13 gives the means of I.Q.'s and comprehension scores for our four groups. The table shows that both control groups had reached a slightly higher level than either experimental group. The analysis of covariance for these data appear in Table 14. The table suggests that the obtained differences may be real, since the F was significant at the 5% level. The interaction term lacked significance.

Things came back to normal when we analyzed the Vocabulary data. Although, Table 15 suggests that the controls excelled here too, the covariance analyses revealed in Table 16 tell us that both mean differences and interaction lack statistical significance.

The Non-Experimental Control classes failed to show any "left out" feeling, as we had feared earlier. Evidently, the motivational factors for improved teaching were about the same for all methods groups.

Some Remarks on the Evaluation

Several things seem apparent. First, the sums of squares for methods was uniformly low for tests given during the third and fourth years. Sharp differences existed between our schools, a not unexpected result.

The correlation coefficients between the Columbia I.Q. scores and C.A.T. scores and Aural Comprehension scores varied from 0.412 and 0.468 (see the Tables of Analysis of Covariance). This is of considerable interest, because measuring intelligence in disparate cultures is troublesome. It is evident that the Columbia has a modest contribution to make.

Discussion of Results

Our data fail to support our original hypotheses. The introduction of conversational English in grade one (to the exclusion of reading) did not result in improved reading skills in grades three or four. On the other hand, delaying the teaching of formal reading for one-half to one

Table 5

California Achievement Tests: Reading*
and Columbia I.Q. Averages

School	Conversation			Group Revised Readiness			Control		
	N	Columbia	Reading	N	Columbia	Reading	N	Columbia	Reading
Barrigada	23	86.83	46.78	24	97.00	51.33	24	86.54	45.96
Inarajan	19	77.74	31.05	20	79.95	35.15	18	86.56	39.06
Sinajana	25	101.08	49.24	26	95.08	46.96	29	89.45	46.72
Tamuning	30	91.27	46.80	27	84.89	37.00	27	91.63	46.92
Totals	97	90.09	44.34	97	89.60	42.84	98	88.81	45.18

*These are raw scores

Table 6

Analysis of Covariance: Columbia I.Q.
vs
C.A.T. Reading (Raw Scores)

Source	ss I.Q.	ss Reading	sp	Adjusted	df	ms'	F
Classes	11,284.96	9,666.94	8,986.54				
Schools	6,212.04	6,792.36	5,949.14				
Methods	82.20	275.73	-71.88	394.21	2	132.35	1.49
M x S	4,990.72	2,598.85	3,109.28	661.73	5	197.10	
Within	81,072.04	9,535.62	33,603.58	81,632.68	279	292.59	<1.00

r = .432

Table 7

California Achievement Tests: Language Averages*

School	Conversation	Group Revised Readiness	Control
Barrigada	36.61	42.25	38.92
Inarajan	23.47	30.25	28.94
Sinajana	45.00	46.08	40.45
Tamuning	43.47	30.74	42.78
Totals	38.32	37.60	38.60

*N and Columbia I.Q. scores are the same as in Table 5

Table 8

Analysis of Covariance: Columbia I.Q.
vs
C.A.V. Language Raw Scores

Source	ss I.Q.	ss Language	sp	Adjusted	df	ms'	F
Classes	11,284.96	13,206.51	10,654.70				
Schools	6,212.04	9,011.62	7,385.50				
Methods	82.20	52.20	-26.20	122.76	2	61.38	< 1.00
M x S	4,990.72	4,142.69	3,295.40	2,030.32	5	406.06	
Within	81,072.04	82,683.58	44,102.68	58,692.00	279	210.04	1.93

r = .468

Table 9

California Achievement Tests: Arithmetic Averages*

School	Group Conversation	Revised Readiness	Control
Barrigada	110.00	104.12	131.25
Inarajan	73.74	80.45	85.28
Sinajana	128.16	116.46	115.66
Yamuning	119.63	92.81	116.00
Totals	110.56	99.40	122.26

*I.Q. data and N's are the same as in Table 5

Table 10

Analysis of Covariance: Columbia I.Q.
vs
C.A.T. Arithmetic (Raw Scores)

Source	ss I.Q.	ss Arithmetic	sp	Adjusted	df	ms'	F	
Classes	11,284.96	120,947.74	23,399.55					
Schools	6,212.04	69,229.70	18,517.06					
Methods	82.20	25,166.65	-101.24	25,746.19	2	12,872.10	3.00	
M x S	4,990.72	26,252.39	4,983.73	21,166.00	5	4,209.20		
Within	71,072.04	569,172.79	96,436.73	454,459.47	279	1,628.89	2.63*	$\frac{1}{F}$

r = .475

*Significant @ 5%

Table 11

Mean Columbia I.Q.'s and Aural Comprehension Scores

	Group								
	Conversation			Revised Readiness			Control		
School	N	I.Q.	A.C.*	N	I.Q.	A.C.	N	I.Q.	A.C.
Barrigada	23	86.83	28.96	24	97.00	31.71	24	86.54	27.96
Inarajan	19	77.74	22.16	20	79.95	21.40	18	86.56	23.89
Sinajana	25	101.08	28.88	26	95.08	30.08	30	89.13	26.67
Yamuning	30	91.27	30.63	27	84.89	28.22	27	91.63	29.85
Totals	97	90.09	28.12	97	89.60	28.18	99	88.72	27.34

*A. C. - Aural Comprehension Mean

Table 12

Analysis of Covariance: Columbia I.Q. vs Aural English
N = 293

Source	ss I.Q.	ss Aural English	sp	Adjusted ss	df	ms'	F
Classes	11,288.54	2,657.40	4,183.50				
Schools	6,082.28	2,161.93	2,837.98				
Methods	95.30	42.72	58.37	38.47	2	17.24	< 1.00
M x S	5,110.96	452.75	1,287.15	96.13	5	18.83	
Within	11,158.33	5,536.18	8,152.21	4,653.93	276	16.86	
Total	33,186.97	8,191.58	12,635.71				2.77*
	M x S (estimated via within)			233.18	5	46.70	

*Significant at 5%

r = .459

Table 13

Mean Columbia I.Q.'s and C.A.T. - Reading: Comprehension

School	Group: Conversation N	I.Q.	Compre*	Revised Readiness N	I.Q.	Compre.	Ex. Control N	I.Q.	Compre.	Non-Experimental Control N	I.Q.	Compre.	
Barrigada	25	85.76	27.72	24	97.00	29.33	24	87.12	28.83	26	87.50	29.35	(a)
Inarajan	18	78.83	18.44	18	80.72	19.39	17	85.53	21.12	18	83.28	28.22	(b)
Sinajana	24	100.71	29.16	25	95.48	29.36	28	89.85	32.50	22	91.50	27.54	(c)
Yawning	26	91.85	30.69	27	82.78	27.52	26	94.42	35.04	18	87.56	31.28	(d)
										17	83.11	29.94	(e)
Totals	93	89.98	27.20	94	89.97	26.92	55	88.92	29.94	101	86.94	29.20	

*Comprehension

(a) Chalan Pago
(b) Merizo
(c) Santa Rita
(d) Talofofo
(e) Tigo

Table 14

Analysis of Covariance: Columbia I.Q.
vs
C.A.T. Reading Comprehension (1962)

Source	ss I.Q.	ss Compre.	sp	Adjusted	df	ms'	F	
Classes	10,412.26	5,767.61	5,209.17					
Schools	5,197.12	4,838.37	4,436.12					
Methods	70.45	595.72	-191.59	596.20	2	298.1	7.05*	
M x S	4,844.69	403.53	964.64	211.46	5	42.29		n/a
Within	80,202.38	37,250.16	22,608.89	30,876.76	269	114.78		
M x S	(estimated via within)			242.77	5	48.55	2.36	

N = 282

r = .466

*.05 > p > .01

Table 25

Mean C.A.T. Vocabulary* (1962)

School	Conversation		Revised Readiness		Control		Non-Experimental Control		
	N	Vocabulary	N	Vocabulary	N	Vocabulary	N	Vocabulary	
Barrigada	25	30.16	24	29.75	24	30.00	26	29.69	(a)
Inarajan	18	20.50	18	21.67	17	22.71	18	30.22	(b)
Sinajana	24	29.29	25	30.16	28	31.93	22	27.23	(c)
Yoseuding	26	31.85	27	27.70	26	31.42	18	33.83	(d)
							17	31.06	(e)
Totals	93	28.54	94	27.88	95	29.65	101	30.22	

*Note: I.Q. data are the same as in Table 13

(a) Chalan Pago
(b) Merizo
(c) Santa Rita
(d) Talofofo
(e) Yigo

Table 16

Analysis of Covariance I.Q.
vs
C.A.T., Reading: Vocabulary

Source	ss I.Q.	ss Vocabulary	sp	Adjusted	df	ms'	F
Classes	10,112.26	3,715.14	4,039.24				
Schools	5,497.12	3,303.57	3,869.71				
Methods	70.15	151.60	-95.89	160.91	2	80.46	1.65
M x S	4,854.69	260.17	285.42	243.35	5	48.67	
Within	80,202.38	22,014.63	15,858.82	18,878.79	269	70.18	
Total	90,614.64	25,729.77	19,898.06				
M x S'	(estimated via within)			331.40	5	66.28	2.06

r = .512

full year does not impede the pupils' later success. This point is abundantly established by our evaluations secured during the third and fourth years of the study. The ability to actually use oral English is directly influenced by directing teachers to concentrate upon it. This observation verges upon redundancy, since teachers of foreign languages have made this discovery long ago.

One aspect of our data raises a fascinating and somewhat embarrassing question: Does careful classroom supervision affect pupil behavior? In other words, to what extent is teacher-supervision related to improved pupil-learning? Our data suggest that the relationship is none too clear. After all, our closely supervised teachers were apparently unable to translate this extra attention into improved pupil learning.

Several possibilities come to mind. First, our supervisors may have lacked the qualities needed to affect teacher behavior. The supervision was done primarily by four persons, who were occasionally assisted by three others. Informal discussions with teachers and principals, plus a number of personal observations by the Project Director failed to support this whole idea.

Another notion is that teachers of Guam may be unusually resistant to supervision. The fact that both teacher and pupil behavior in Oral English were sharply changed suggests that this is not the answer.

The Project Director is enamored of a third possibility, namely, that supervision isn't all it's cracked up to be. Certainly, the idea is worth looking into. Studies should be conducted to see what kinds of supervision actually change pupil behavior; the conditions under which it is most effective, etc. It does seem as if some of us have accepted supervision on faith rather than upon the results of carefully designed and executed studies.

A final point remains to be made concerning our study. Maybe our current approaches to teaching language arts are just wrong for Chamorro-speaking children. Suppose, for an example, that an experiment was designed to try various methods of teaching tensor analysis to first grade pupils. It is quite unlikely that ANY method would be effective, because first grade pupils are not ready to study tensor analysis. And, so with Chamorro-speaking children. We already know that as a language system, Chamorro is completely different from English. There are no prepositions. Tenses are formed by altering adverbs. And, only three tenses exist, etc.

Consequently, our efforts to improve the teaching of English may have faltered, not because of our methods, but rather, because of our content. This means that a linguistic analysis of Chamorro is needed. Then, with this as a background, the English content for the different grade levels could be determined. It well might be that the "Dick and Jane" approach may turn out to be less than judicious. The validity of this proposition awaits the advent of linguists on Guam.

Summary and Conclusions

The schools of Guam teach English to their Chamorro-speaking pupils via the Scott-Foresman system of pre-primers, readers, workbooks, etc. The results have been discouraging; our pupils are behind their mainland fellows from one to three years. Believing that part of this trouble was caused by introducing reading too soon, a study was devised wherein certain children learned conversational English during the first grade, while reading was postponed until grade two. Other pupils in the same schools received the same treatment, but for only one-half of a year. These Revised Readiness children learned to read after Christmas. Two sets of controls were established; one control class in each of the four experimental schools, and five control classes in schools apart from the experiment. This second set of controls was provided as a precaution against the development of unusual motivating factors in the experimental schools, as occurred in the Hawthorne studies.

The experimental teachers were changed at the ends of grades one and two. These teachers attended special summer sessions at the College of Guam. Here, they learned techniques of teaching conversational English and related subjects. During each school year, they attended weekly seminars and were carefully supervised. Experimental classes received additional supplies and equipment, including record players, supplemental readers, etc. At the end of the third year, supervision, seminars, and special assistances were discontinued.

The experiment was evaluated in several ways. At the end of the first year, a test of oral English was devised and given to all pupils. Also, the American School Achievement Tests were given.

During the spring of the third year, the California Achievement Tests (Reading, Arithmetic, and Language), and the picture section of Lado's Test of Aural Comprehension were given. Finally, the reading section of the California Achievement Test was given toward the end of the fourth year.

The results were ambiguous. Neither experimental group demonstrated superiority on any of the measures utilized, with one small exception: at the end of grade one, the conversational pupils excelled in their ability to use conversational English. In brief, the control classes, whose teachers were not exposed to the myriad special aids, did as well as the experimental classes.

There appeared to be at least four explanations for these results. First, the supervision may have been inept. This notion was rejected, because neither principals, teachers, nor Project Director professed anything but contradicting evidence. That is, the supervisors' help was, in most cases, welcomed by teachers and principals.

Perhaps Guamanian teachers are overly resistant to change. The fact the special supervision did change teachers' and pupils' oral behavior seems to lay low this idea. Further, the Project Director has witnessed teacher behavior in other local schools change by reason of either supervision or of college courses.

Finally, these results may have been caused by our failure to recognize the complexity of teaching English to Chamorro-speaking children. The Chamorro language structure is quite unlike English. So, our Scott-Foresman approach, with its emphasis upon simple nouns and verbs may be totally inadequate for this learning situation. This matter might be resolved through linguistic analysis of Chamorro. Such an analysis could become the basis for language arts curriculum building in the Marianas Islands.

A final point remains to be made. How did it come to pass that highly supervised teachers were unable to convert their plethora of extra help (compared to the control teachers) into higher levels of pupil achievement? It is just possible that we educators have been toiling under the aegis of a false assumption. Many schools and school systems employ supervisors. The supervisors endeavor to change teacher behavior. And, this, in turn, allegedly increases pupil achievement. But is this really so? Research is sorely needed to clarify this and related issues.

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